

ANSWER 10 OF 13 CAPLUS COPYRIGHT 2003 ACS

AN 2001:663236 CAPLUS

DN 136:334764

TI Systemic relaxin in pregnant pony

mares grazed on endophyte-infected fescue: effects of fluphenazine treatment

AU Ryan, P. L.; Bennett-Wimbush, K.; Vaala, W. E.; Bagnell, C. A.

CS Department of Molecular Biology, Princeton University, Princeton, NJ, USA

SO Theriogenology (2001), 56(3), 471-483

CODEN: THGNBO; ISSN: 0093-691X

PB Elsevier Science Inc.

DT Journal

LA English

AB Tall fescue is one of the most widely grown forage grasses for horses in the United States. However, it is frequently infected with the endophyte *Neotyphodium coenophialum* which produces ergot alkaloids that cause severe adverse effects in the pregnant mare. The objectives of this study were to det. the effects of fescue toxicosis and fluphenazine on circulating relaxin in pregnant pony mares and evaluate the usefulness of relaxin as a monitor of treatment efficacy. Twelve mares were maintained on endophyte-infected tall fescue pasture. Group TRT (n = 6), received 25 mg of fluphenazine decanoate (i.m.) on Day 320 of gestation while Group UTRT served as untreated controls. Daily blood samples were collected from Day 300 of gestation until Day 3 post partum and analyzed for plasma relaxin concns. using a homologous equine RIA. Mean gestation lengths were 330 \pm 0.7 and 336.5 \pm 3.2 days for TRT and UTRT mares, resp. (P = 0.07). Mean plasma relaxin concns. in both groups of mares during the week before treatment (Day 313 to 319) were not different (UTRT, 53.4 \pm 11.3 ng/mL; TRT, 61.4 \pm 9.3 ng/mL). In the week after treatment (Day 320 to 326), mean plasma relaxin tended to be higher (P = 0.1) in TRT mares (66.7 \pm 6.2 ng/mL) when compared with UTRT mares (49.6 \pm 6.6 ng/mL), representing a 17.1 ng/mL difference in circulating relaxin between the two groups. Systemic relaxin during the last week before delivery (days relative to parturition) for UTRT and TRT mares was 45.7 \pm 6.7 and 64.7 \pm 6.4 ng/mL (P = 0.06), resp. At Day -8 and Day -5 relative to parturition, systemic relaxin in TRT mares was significantly higher (P < 0.05) than in UTRT mares. Three of the six UTRT mares and one TRT mare showed clin. symptoms of fescue toxicosis. In the week before delivery, circulating relaxin in mares with problematic pregnancies (39.9 \pm 7.8 ng/mL) was significantly lower than concns. measured in mares with normal pregnancies (63.4 \pm 5.4 ng/mL; P = 0.03). Clin. observations suggest that a one-time injection with fluphenazine improved pregnancy outcome by reducing the adverse effects of fescue toxicosis concomitant with a stabilization of plasma relaxin concns. These data support the hypothesis that systemic relaxin may be a useful biochem. means of monitoring placental function and treatment efficacy in the mare.

RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

can swear behind

Applicant